

# Western Australian Water Safety Framework 2004-2007

A Strategic Framework for Addressing Drowning,  
Near-drowning and Related Injury in Western Australia



Department of Health  
Injury Prevention Branch  
Department of Sport and Recreation  
Department of Education and Training



# **Western Australian Water Safety Framework: 2004-2007**

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Near-drowning and Related Injury in Western Australia

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# Acknowledgements

The Western Australian Water Safety Framework 2004-2007: A Strategic Framework for Addressing Drowning, Near-drowning and Related Injury in Western Australia was developed with the assistance of the Western Australian government and non-government organisations.

The development of the Framework was coordinated by the Water Safety Management Group comprising of representatives from the Department of Health, Department of Sport and Recreation and the Department of Education and Training.

The Water Safety Management Group would like to thank all those involved for their valued contribution and commitment to drowning-prevention in Western Australia.

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## Foreword from Minister for Health

Western Australia is a unique State with a large and extensive coastline and a hot climate. Many of our recreational activities centre on or around our beaches, rivers, lakes and pools. The water holds plenty of attraction for our community, as well as for interstate and international visitors. However, we need to be mindful of the potentially dangerous aspects of these aquatic environments as drowning, near-drowning and related injuries are major concerns. Additionally, drownings and near-drownings are taking place in the home environment – in baths, nappy buckets, water features and pools, thus water safety strategies must consider the home environment and the recreational environment.

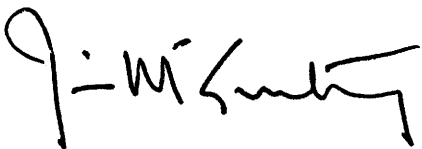
In addressing what is a preventable cause of death and injury, I am pleased to be able to present to you the Western Australian Water Safety Framework 2004-2007. This is our State's strategic framework for the prevention of drownings, near-drownings and related injuries from which specific strategy documents will be developed by both government and non-government stakeholders. The principles outlined in and underlying the Framework support the Government's belief in water safety for all and the vision is one that I look forward to our working together to achieve.

The vision for Western Australia is:

***To establish a significant downward trend in the number of drownings and near-drownings and related injuries in Western Australia in the lifetime of the Framework and beyond.***

Most importantly, **all drownings are preventable**, so we as a State are committed to creating an environment and culture that does prevent drownings. This is only possible if we work in a coordinated and cooperative way that ensures the effective and strategic management of resources.

I am pleased to bring you this Framework and would like to thank all those who have been, and will be, giving of their time to develop and implement the strategies under this Framework.



Jim McGinty MLA  
Minister for Health

# Contents

Acknowledgements	2
Foreword from Minister for Health	3
Glossary of Terms	5
Introduction	6
Section 1 - The Western Australian Water Safety Framework 2004-2007	7
Strategic Action Area 1 – Water Safety Education and Awareness	11
Strategic Action Area 2 – Research and Evaluation	12
Strategic Action Area 3 – Policy, Standards, Legislation and Enforcement	13
Strategic Action Area 4 – Surveillance and Rescue	14
Implementation of the Framework	15
Section 2 - The Nature and Extent of Drownings, Near-drownings and Related Injuries	19
Section 3 - Current Water Safety Initiatives in Western Australia	27
References	30
<b>Appendices</b>	
1. Matrix of Current Activities Supporting Drowning Prevention	32
2. Methodology for the Development of the Framework	42
3. Evaluation Principles	45

## Glossary of Terms

**Aquatic:** All water environments including home and outdoor locations.

**Drowning:** Death by suffocation from submersion in a liquid, usually freshwater or seawater.

**Near-drowning:** Submersion in a liquid which the victim survives, at least temporarily.

**Related Injuries:** This policy Framework is concerned with water-related injuries that result in drowning or near-drowning and injuries sustained from a near-drowning experience. The term 'related injuries' is used throughout the Framework to refer to these events. Spinal cord injury is a related injury.

**Framework:** The name used for this policy that aims to provide a broad foundation from which strategies can be developed. This policy outlines future directions for action to develop better coordination and partnerships.

**Objectives:** Are the desired impacts of strategies, actions and action plans.

**Performance Indicators:** Refers to the measures of success in achieving desired objectives.

**Principles:** Are guiding factors that must be considered in all strategies and actions developed under the policy. No part of the policy should compromise or conflict with the principles.

**Strategic Action Plans:** Refers to the actions developed under each of the strategic action areas. These plans will be determined by a working group for each strategic action area. Actions that have already been identified as important have been included in the policy.

**Strategic Action Areas:** Describes the four broad issues in this policy requiring attention, capturing current and future issues.

**Vision:** Is the desired long-term effect of the policy.

**Water Safety Providers:** Organisations directly involved in the delivery of water-related activities and water safety awareness.

**Western Australian Water Safety Council:** Is the collaborative of peak water safety and injury prevention organisations and government agencies currently involved in supporting Western Australian water safety initiatives.

**Working Group:** It refers to a group of interested stakeholders with expertise and knowledge in water safety, injury prevention and risk management who are working together to assist in action planning in the four strategic action areas of the Framework.

## Introduction

In Western Australia approximately one person a fortnight dies by drowning and every four and a half days a person is hospitalised by a near-drowning experience. Drowning, near drowning and related injuries are a significant cause of premature death and injury, particularly among young children.

State government departments have long recognised and supported water safety and drowning prevention as community issues. Particularly important to the state is the work of the peak water safety providers such as Surf Life Saving Western Australia and the Royal Life Saving Society (WA) who, in partnership with government, have made significant contributions to water safety and drowning prevention.

As the environments and risk factors in which drownings occur are many and varied, preventing drowning is a focus area for a number of government and non-government stakeholders. The Western Australian Water Safety Framework 2004-2007 is designed to facilitate better coordination, cooperation and collaboration between these groups. The better coordination of these groups and the strategic management of water safety in Western Australia, will encourage better practice and enhance the effective and efficient use of available resources.

A number of plans and processes have informed the development of this Framework including:

- *National Water Safety Plan 2004-2007*
- *National Water Safety Plan 1998*
- *National Injury Prevention Plan: Priorities for 2001-2003*
- *Discussion paper National Injury Prevention Plan Priorities for 2004 and Beyond*
- Individual state water safety plans
- Consultation with Western Australian stakeholders.

The Western Australian Water Safety Framework 2004-2007 outlines the approach the state will take in preventing drowning, near-drowning and related injuries. The Framework identifies four key focus areas:

1. Water Safety Education and Awareness
2. Research and Evaluation
3. Policy, Standards, Legislation and Enforcement
4. Surveillance and Rescue.

Throughout this Framework, these four focus areas are referred to as 'strategic action areas'.

This Framework does not detail all the specific actions for each strategic action area but rather provides direction for the development of comprehensive high-level and whole-of-government strategic action plans.

Importantly, strategies and actions developed under the Framework will not replace the excellent water safety activities currently conducted in Western Australia but rather will build on and complement them.

*A Matrix of Current Activities Supporting Drowning Prevention* is included in the Framework. The matrix is not an exhaustive list of all Western Australian water safety initiatives but it provides significant guidance on current activities and highlights which organisations are conducting activities supporting drowning prevention.

The Department of Health will provide the overall monitoring of the Framework for the purposes of reporting to government and non-government stakeholders and water safety service providers.

This Framework is designed to be a living document and thus the methodology includes ongoing assessment of the document's relevance.

# **Section 1 – The Western Australian Water Safety Framework: 2004-2007**

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## Scope of the Western Australian Water Safety Framework: 2004-2007

Drowning occurs in a number of settings. Young children more often drown in private swimming pools, nappy buckets, baths and ponds. Drownings occur in the home, at beaches, in public and private swimming pools, when people are scuba diving, fishing or in boating mishaps. Drowning occurs for many different reasons, commonly: lack of supervision, poor water familiarisation, inadequate barriers and lack of cardio-pulmonary resuscitation and lifesaving skills among supervisors. In some instances alcohol and drug use are also associated.

Nationally, the Australian Water Safety Council was established in 1998 to provide a coordinated and cooperative approach to water safety in Australia. The Council produced the first national plan for water safety in 1998 as a broad framework for water safety stakeholders. This initial plan has been evaluated and has informed the development of the second national plan for the period 2004-2007. This second plan builds on the progress achieved by the first national plan, and continues to provide a broad framework for national action.

The scope of the Western Australian Water Safety Framework 2004-2007 is based on the prevention of drowning, near-drowning and related injuries in the settings below, whilst not restricting people's participation in aquatic activities.

### Settings

- Coastal ocean
- Inland waterways such as rivers and dams
- Public and private swimming pools
- Public venues
- The home environment

Many drownings and near-drownings are **caused by** injuries and many **cause** injuries. Often the injuries of near-drowning survivors are serious, particularly spinal injuries. Thus the prevention of these related injuries is also included in this Framework. For the purposes of this document, discussion on preventing 'drowning' includes preventing drowning, near-drowning and related injuries.

The Framework does not directly cover the technical aspects of boat safety or underwater diving and snorkelling safety. These domains are covered by legislation, regulation or industry standards.

# The Strategic Framework

## Vision

To establish a significant downward trend in the number of drownings, near-drownings and related injuries in Western Australia in the lifetime of the Framework and beyond.

## Purpose

To achieve coordination and collaboration among government and non-government stakeholders for an improved strategic management of water safety in Western Australia.

## Guiding Principles

The following principles underpin the Framework:

- Drownings, near-drownings and related injuries are preventable.
- Recognition of the diversity of aquatic settings and the unique safety issues they present.
- Participation in aquatic activities is encouraged as part of the Western Australian lifestyle and visitor experience.
- Safe aquatic environments are provided to all Western Australians and visitors.
- In recognising the state's size and its cultural and physical diversity, local initiatives that are applicable to local areas and utilise local resources are encouraged, as is leveraging statewide knowledge and experience.
- Strategies and actions are supported through capacity building in local communities, such that Western Australia develops a culture of water safety.

## Strategic Action Areas

The Framework focuses on four strategic action areas, which best capture the issues that need attention for effective strategic management.

1. Water Safety Education and Awareness
2. Research and Evaluation
3. Policy, Standards, Legislation and Enforcement
4. Surveillance and Rescue

**Water Safety Education and Awareness** – The directions for the planning, development and implementation of water safety education and awareness strategies for stakeholders and the public.

**Research and Evaluation** – The directions and systems/protocols for data collection and consistency of information sharing on water-related injury and water-related rescues, and the monitoring and assessment of water safety strategies to encourage better practice.

**Policy, Standards, Legislation and Enforcement** – The directions for the effective and cohesive management of water-related policy, legislation, regulation and standards.

**Surveillance and Rescue** – The directions for the effective management of rescue and emergency services.

These strategic action areas are broad action areas; they are directive in nature but are purposely not detailed strategic action plans.

The following Framework will guide the development of high-level, whole-of-government strategic action plans.

## Strategic Action Area 1 – Water Safety Education and Awareness

Objectives	Actions	Performance Indicators
1. To improve public awareness of water safety strategies.	1.1 Identify the gaps in water safety attitudes, knowledge, skills and behaviour of community members who use aquatic environments and those from high-risk groups.	1.1.1 Inclusion of attitude, knowledge, skills and behaviour components in evaluation surveys of awareness-raising programs.
	1.2 Develop, implement and evaluate appropriate aquatic safety public awareness campaigns targeting high-risk groups.	1.2.1 Inclusion of attitude, knowledge, skills and behaviour components in evaluation surveys of awareness campaigns for high risk groups.
2. To encourage safe participation in aquatic activity.	2.1 Promote the development of competencies to safely participate in aquatic activity.	2.1.1 Evidence of competency-based training programs.
	2.2 Increase knowledge and understanding of what embodies safe participation.	2.2.1 Evidence of building knowledge and understanding of water safety.
<b>STAKEHOLDER EDUCATION AND AWARENESS RAISING</b>		
3. Aquatic safety programs delivered by service providers through effective communication, effective partnerships and workforce development.	3.1 Re-orientate workforce development according to the needs of the community and findings of research across all strategic directions.	3.1.1 Include recommendations for workforce development in research reports.
	3.2 Increase effective partnerships between government and water safety providers designed to improve the development and maintenance of water safety services.	3.2.1 Evidence of a number of successful partnerships in water safety provision.
		3.2.2 Subcommittees inclusive of aquatic safety service providers.

For information on several of the agencies involved in policy, standards, legislation and enforcement activities see Appendix 1, Table A. This is not an exhaustive list of information but provides some indication of the stakeholders and levels of activity. This list describes the activities of those agencies which play a key role in supporting drowning prevention.

## Strategic Action Area 2 – Research and Evaluation

Objectives	Actions	Performance Indicators
1. To monitor drownings, near drownings and related injuries and to provide information that is accurate, reliable and accessible.	1.1 Develop a comprehensive database of water-related injuries.	1.1.1 Usefulness and accessibility of injury database.
	1.2 Develop standardised methodologies for incident surveillance.	1.2.1 Sets of related injury information that are directly comparable between years and states showing trends and alerting to dangers.
	1.3 Develop a long-term surveillance plan that ensures consistent, comprehensive surveillance that will enable accurate, reliable trend analysis.	1.3.1 Ongoing accumulation of accurate, reliable injury trend analyses.
2. To research the underlying causes, associations and links that contribute to drownings, near-drownings and related injuries in all settings where these incidents occur.	2.1 Encourage high-quality rigour in research practice and reporting for drownings, near-drownings and related injuries.	2.1.1 Information and reports are relevant and meaningful to stakeholders.
	2.2 Develop a coordinated and comprehensive research agenda that illuminates the causes of aquatic injury and drowning.	2.2.1 Produce summary report that outlines the causes of drowning, near-drowning and related injury.
3. To evaluate strategies and programs designed to reduce injury in aquatic settings, including the home environment.	3.1 Identify and promote best practice in relation to water safety education and public awareness programs.	3.1.1 Literature review and research with stakeholders regarding best practice interventions. Discussion paper developed.
	3.2 Establish standardised evaluation methodologies and protocols for sharing, collection and analysing data for water safety programs and initiatives.	3.2.1 Promotion of evaluation guidelines document outlining reporting techniques and format.
	3.3 Establish a plan for the regular evaluation of water safety initiatives.	3.3.1 Timeline of events for evaluation produced.

For information on several of the agencies involved in research and evaluation activities see Appendix 1, Table B. This is not an exhaustive list of information but provides some indication of the stakeholders and levels of activity. This list describes the activities of those agencies which play a key role in supporting drowning prevention.

### Strategic Action Area 3 – Policy, Standards, Legislation and Enforcement

Objectives	Actions	Performance Indicators
1. Ensure that policy, legislation and regulations maximise safety in the aquatic industry.	1.1 Review the current status of aquatic safety policy, legislation and regulations with regard to effectiveness and appropriateness.	1.1.1 Effectiveness and appropriateness of aquatic safety policy, legislation and regulations established.
	1.2 Where appropriate, develop and implement new legislation and regulation.	1.2.1 Promotion of aquatic safety legislation and regulations.
	1.3 Monitor the effectiveness of the enforcement of legislation.	1.3.1 Legislation enforced effectively.
2. To establish best practice water safety standards.	2.1 Identify and review current industry standards and policies pertaining to water safety and aquatic environments.	2.1.1 Literature review of aquatic safety standards documents. Discussion paper developed.
	2.2 Develop and implement appropriate standards that are agreed to by industry and that increase the safety of the aquatic environment.	2.2.1 Promotion of water safety standards to industry and private sector water safety organisations.
		2.2.2 Access to water safety standards documents.

For information on several of the agencies involved in research and evaluation activities see Appendix 1, Table C. This is not an exhaustive list of information but provides some indication of the stakeholders and levels of activity. This list describes the activities of those agencies which play a key role in supporting drowning prevention.

## Strategic Action Area 4 – Surveillance and Rescue

Objectives	Actions	Performance Indicators
1. To ensure stakeholders and individuals are aware of their duty-of-care responsibilities.	1.1 Review and assess risk management protocols in relation to the duty of care.	1.1.1 Effectiveness and appropriateness of risk management protocols.
	1.2 Where appropriate, develop and enhance risk management protocols, planning and the adoption of preventative controls.	1.2.1 Promotion of enhanced risk management protocols.
2. Ensure an adequate response in the event of an emergency.	2.1 Review the current status for managing emergencies in aquatic locations.	2.1.1 Effectiveness and appropriateness of current standards for managing emergencies in aquatic locations.
	2.2 Where appropriate, develop agreed standards to assess the adequacy of response in the event of an emergency.	2.2.1 Agreed standards have been established by water safety providers.
	2.3 Where appropriate, develop and implement rescue and emergency procedures and equipment.	2.3.1 Promotion of procedures and equipment to water safety providers.

For information on several of the agencies involved in research and evaluation activities see Appendix 1, Table D. This is not an exhaustive list of information but provides some indication of the stakeholders and levels of activity. This list describes the activities of those agencies which play a key role in supporting drowning prevention.

## Implementation of the Framework

The Framework provides a tool designed to facilitate and provide direction for the development of specific strategic action plans. The Framework does not recommend specific strategies but rather highlights the areas that the consultation process and the relevant data collected have determined as critical.

It is important to note that the Framework is not a document identifying gaps.

Many of the areas identified as important are already being progressed and effective work is being done by government and non-government stakeholders in these areas. Therefore, to aid in the development of strategic action plans, a *Matrix of Current Activities Supporting Drowning Prevention* undertaken by agency and strategy areas is provided in Section 3 and in the Appendices of this document.

Implementation of the Framework will evolve from identifying what needs doing in water safety prevention to coordination for action. This will build on the broad and excellent water safety initiatives and health promotion strategies of government and non-government stakeholders in Western Australia. Relevant national and state plans and information will be considered in the implementation phase so that cooperation and coordination is enhanced and better practice is encouraged.

The phases below relate to the implementation of this Framework with a view to strengthening and complementing existing work being undertaken in local areas and by local providers.

### PHASE 1

October 2004:

- Release the Western Australian Water Safety Framework 2004-2007 during Community Safety Month
- Establish the Western Australian Water Safety Council



### PHASE 2

October 2004 – December 2006:

Working Groups to be established to consider:

- Mapping of risk and checking of mechanisms to manage and reduce risk
- Identification of gaps and areas for improvement
- Planning, sharing and developing Strategic Action Plans for drowning prevention in aquatic locations
- Implementing, monitoring and adjusting



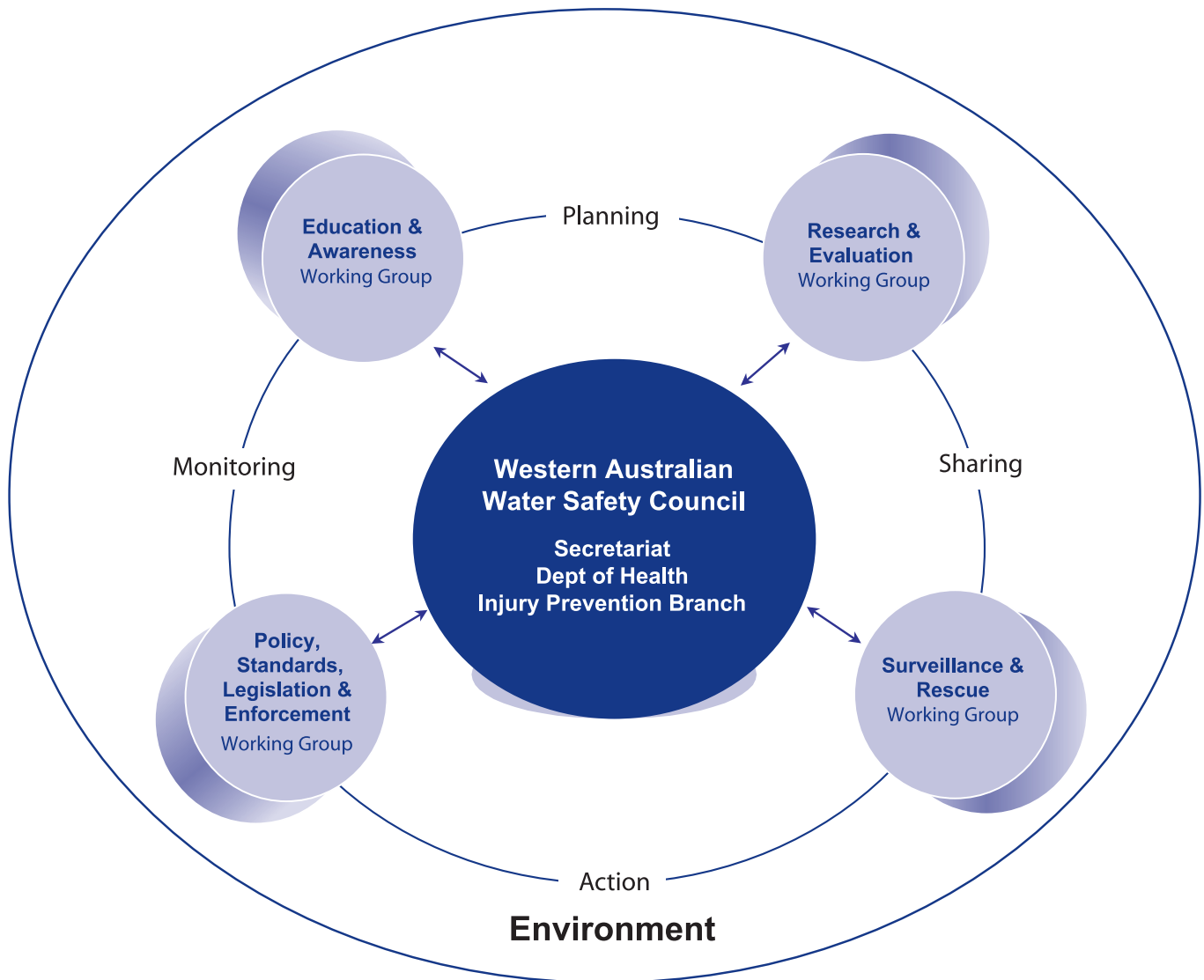
### PHASE 3

January 2005 – March 2007:

- Monitoring and evaluation of key Strategic Actions Areas
- Agency monitoring and evaluation
- Report and recommendations to the Minister for Health



An operational model that describes the Western Australian Water Safety Council and Working Groups for implementation of the Framework is presented below. This model illustrates that the main purpose of the Council and Working Groups is to facilitate and encourage coordination and cooperation among government and non-government stakeholders for improved strategic management of water safety in Western Australia.



It is intended that the Western Australian Water Safety Council together with the Working Groups would:

- Play a strong role in facilitating collaboration and coordination of water safety initiatives in Western Australia.
- Add value to the continuity and enhancement of a comprehensive approach to drowning prevention in all aquatic locations.
- Provide a mechanism for sharing data and information amongst water safety providers.
- Use their breadth of experience and knowledge in strategic planning for the enhancement of water safety initiatives.

**Phase 1 includes:****Establishment of Western Australian Water Safety Council**

The Western Australian Water Safety Council (WAWSC) will be a collaborative of peak water- safety and injury-prevention organisations and government agencies currently involved in supporting Western Australian water safety initiatives.

The WAWSC will facilitate and encourage coordination and collaboration among government and non-government agencies for improved strategic management of water safety in Western Australia. Some specific roles of the WAWSC will include:

- Provision of a mechanism that facilitates and encourages coordination and collaboration among government and non-government stakeholders for improved strategic management of water safety in Western Australia.
- Use of collective expertise, knowledge, skills, resources and services provision across government and non-government sectors towards the implementation of the Framework.
- Identification of any gaps in the strategic management of water-safety initiatives in relation to the strategies necessary for the prevention of drowning and near-drowning in Western Australia.
- Providing advice, guidance and support to Working Groups to develop strategic action plans that address areas of identified need and to outline strategies to reduce drowning and near-drowning at a state and regional level in the four strategic action areas.

The WAWSC does not represent an additional layer of organisational bureaucracy and it will not receive funding directly. It will not be responsible for the direct delivery of water safety programs within Western Australia. The Council will however, provide an opportunity for cooperation, coordination and collaboration between representative organisations.

**Phase 2 includes:****Establishing Working Groups**

Working Groups with expertise and knowledge in water safety, injury prevention and risk management will be established as required to assist in action planning in the four strategic action areas of the Framework. The primary role of the Working Groups is to outline high-level and whole-of-government actions and strategies for implementation of the Framework and will include:

- Development of Strategic Action Plans that provide, enhance and build on the water safety initiative. This will include more detail on the strategic direction and how objectives will be achieved. These should include the identification of gaps and recommendations on how these will be addressed.
- Provision of information on the current status of water safety activities so that this can be reflected in the Framework's Appendix *Matrix of Current Activities Supporting Drowning Prevention*. This will need to be updated bi-annually so stakeholders can monitor the implementation of the Framework.
- Recommendations for consultation processes with partners and stakeholders who provide further mechanisms for input into the planning, sharing and implementation of the Framework.
- Referral of issues that may be relevant to other Working Groups and responding to issues raised by other Working Groups.

**Phase 3 includes:**

**Monitoring and Evaluation**

Monitoring and evaluation of key strategic action areas and the process of implementing the Framework.

Agency monitoring and evaluation which will be used to update the *Matrix of Current Activities Supporting Drowning Prevention*.

# **Section 2 – The Nature and Extent of Drownings, Near-drownings and Related Injuries**

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# The Nature and Extent of Drownings, Near-drownings and Related Injuries

## National Perspective

Although drowning-related mortality occurs across all age groups, the greatest over-representation is among children younger than five years (Waters, 1998; Cass et al, 1996; NCIPC, 2001; Nixon et al, 1995; HDWA, 1988). In Australia, drowning is the most common cause of accidental death for children younger than five years, of whom 70% are aged between one and three years (Fisher and Balanda, 1997; Byard and Lipsett, 1999; Pitt and Balanda, 1991; Blum and Shield, 2000). The estimated lifetime cost of accidental drowning and immersion in 1995-96 was \$132 million (Moller, 1998). The more serious injuries can result in long-term disabilities which represent a significant cost to the health care system.

Thirty-five children younger than five years died in Australia over the 12 month period from July 2000 to June 2001, and for every drowning death a further three children were admitted to hospital following a serious immersion incident. The consequence of serious immersion incidents is considerable, with up to 20% of children suffering brain damage (RLSSA, 2001).

Alcohol consumption is a major contributing factor to drowning. A recent national study on Alcohol and Water Safety found that between 1991 and 1996, alcohol was involved in 27% of all drowning deaths related to recreational activity (Driscoll et al, 2003). It is important to note also that alcohol-related drowning may be under-estimated because a blood alcohol concentration reading cannot always be obtained.

## Injuries Resulting from Near-drowning

Injuries resulting from an immersion incident can range from spinal and head injuries to swimmer's cramp. Those more serious injuries can result in long-term disabilities which represent a significant cost to the health care system.

In a report on persisting injury and disability among hospitalisations for near-drowning, 721 near-drowning cases were identified among hospital separations in Australia for 1997-98 (Steenkamp, 2002).

- Of the 721 near-drowning cases, most (70%) were treated for minor injuries such as immersion and swimmer's cramp.
- Fractures of the neck and trunk accounted for approximately 4% of hospitalisations (Steenkamp, 2002).

The most serious consequence other than death from an immersion incident is a Spinal Cord Injury (SCI) or Traumatic Brain Injury (TBI).

- Of the 721 near-drowning cases, 35 people (5%) suffered a long-term disability resulting from a near-drowning incident.
- Of these cases, 33 people (94%) had either an SCI or a TBI. One case had both a TBI and an SCI.

Ten percent of all spinal cord injuries occur in the aquatic environment. The mechanisms of injury include being dumped by a wave, falling or diving into rivers and lakes, diving into swimming pools and diving into surf (O'Conner, 2000). Injuries sustained from diving accidents are more likely to result in quadriplegia than paraplegia (Zejdlik, 1992). The personal cost is immeasurable for those involved, their families and relatives. Nationally, the financial impact of diving spinal cord injury equates to approximately \$30 million per annum (Paraplegic Benefit Fund, 2003).

## National Target Groups

Nationally in both the 1998 and the 2004-2007 National Water Safety Plans, the 0-4 age group is identified as the first priority target group. The second priority target group is males aged 16-35 who are considered high risk takers. The third target group identified by this plan is rural communities.

Other target groups under the National Water Safety Plans are:

- Children 5-15
- Adults 36-54
- Adults 55+
- Tourists
- Culturally diverse communities

The National Water Safety Plan 2004-2007 provides some more detail on the drowning in Australia (Australian Water Safety Council 2004).

## Western Australian Perspective

Current data on the incidence of injury in Western Australia shows that drowning is the sixth leading cause of injury resulting in death and ranks eighth as a cause of injury resulting in hospitalisation.

Between 1995 and 2000 there were 187 drowning deaths and 476 drowning hospitalisations (this is an average of 31 deaths and 79 hospitalisations per year).

Table 1 shows a comparison between Western Australian rates of drowning and the national rates and targets. In all categories the rates for Western Australia are higher than the national target. These figures demonstrate that it is imperative for Western Australia to maintain and improve its current drowning prevention measures to minimise the occurrence of drowning fatalities.

**Table 1: Deaths and hospitalisation rates due to drowning and near-drowning 1995-2000 (Rates per 100,000)**

	Western Australia (1995-2000)	National Target	National Actual (1997)
Death rate (0-4 yrs)	5.9	3.0	4.6
Death rate (total)	1.7	N/A	1.5
Hospitalisation rate (0-4 yrs)	32.1	20.7	23.8
Hospitalisation rate (total)	4.5	N/A	4.5

## High-risk Groups

Although drowning comprises a very small proportion of all injury deaths and hospitalisations, it remains a significant issue for young children.

- For the period 1995-2000, 45 children aged between 0 and 4 years of age died and 244 were hospitalised as a result of drowning. This represented 24% of drowning deaths and 51% of drowning hospitalisations.

- For the period 1995-2000, children in the first four years of life were 3.5 times more likely to die and 7.3 times more likely to be hospitalised due to drowning than the Western Australian population as a whole.

The impact of drowning is even greater when measured in Potential Years of Life Lost (PYLL) due to the young age of the majority of victims. PYLL is based on the years of life lost through premature death.

- During 1995-2000 each drowning death contributed an average of 44.8 PYLL, compared to an average of 36.9 PYLLs per death due to all injury causes (see Table 2 below).

**Table 2: Potential years of life lost by cause (Western Australia, 1995-2000)**

Cause	Male	Average	Female	Average	Persons	Average
<i>Unintentional</i>						
Transport	37,906.6	38.7	12,842.9	39.0	51,151.7	39.1
Other unintentional	8,845.6	33.1	2,314.4	33.5	11,275.7	33.6
Falls	1,983.5	20.9	479.0	12.9	2,490.3	18.9
Accidental poisoning	10,297.1	38.1	3,335.4	35.9	13,750.1	37.9
<b>Drowning</b>	<b>5,765.4</b>	<b>42.7</b>	<b>2,101.7</b>	<b>50.0</b>	<b>7,928.1</b>	<b>44.8</b>
Fires, burns, scalds	1,026.4	41.1	420.5	30.0	1,457.0	37.4
<i>Intentional</i>						
Self-inflicted	39,301.5	35.0	9,494.9	34.7	49,269.0	35.3
Inflicted by another	3,895.3	37.5	2,482.4	38.8	6,402.4	38.1
<i>Undetermined</i>	747.0	39.3	383.4	34.9	1,136.4	37.9

Note: Due to method of calculating PYLL, 'male' and 'female' may not add up to 'Persons'.

Research shows that:

- Males are more at risk of drowning than females. Between 1995 and 2000, for males the risk of death by drowning was 3.0 times higher and the risk of hospitalisation was 2.1 times higher than for females.
- The 20-44 age group is another high-risk group. Between 1995-2000 in the 20-44 age group there were 65 deaths and 108 hospitalisations from drowning. This represented 35% of drowning deaths and 23% of drowning hospitalisations.

## Cost of Drowning

Accidental drowning and near-drowning imposes a considerable burden on society, whether this burden is measured in terms of lives lost and the results of near-drowning injuries or the financial costs of drownings and near-drowning incidents. A measure of the economic impact that drowning has on the WA community is the estimated lifetime cost. The total lifetime cost is an estimation of costs relating to the treatment of injury (direct costs) and costs relating to the loss, or partial loss, to society of the productive efforts (both paid and unpaid) of injury victims and, in the case of children, the productive efforts of caregivers (indirect costs).

There were 176 accidental drownings and near-drowning incidents in Western Australia in 2001-02, of which 27 were fatalities and 3 resulted in moderate or severe disability. The costs of drownings and near-drownings were \$46.5 million, with an average cost of \$1.598 million for a fatality, \$984 700 for a case with moderate or severe disability, \$6 700 for a fully recovered case admitted to hospital, and \$850 for a fully recovered case attending an emergency department and discharged. Ninety-eight percent of the costs of accidental drowning and near-drowning resulted from productivity and quality of life losses (Hendrie, 2004).

## Drowning by Regions of Western Australia

Statistics show that rural residents are at greater risk of drowning than metropolitan residents.

- The risk of death by drowning for rural residents was 1.7 times higher, and the risk of hospitalisation was 1.6 times higher, than for metropolitan residents (see Table 3).

**Table 3: Regional comparison of deaths and hospitalisations due to drowning (Western Australia 1995-2000)**

	Metro	Rural
<b>Deaths</b>		
Number	107	62
Rate (per 100,000)	1.3	2.3 (ratio = 1.7)
<b>Hospitalisations</b>		
Number	290	163
Rate (per 100,000)	3.7	6.1 (ratio = 1.6)

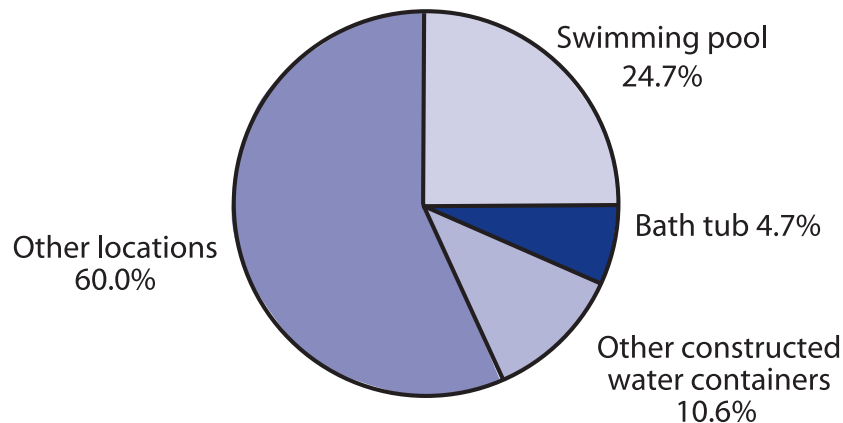


## Environments Where Drowning Occurs

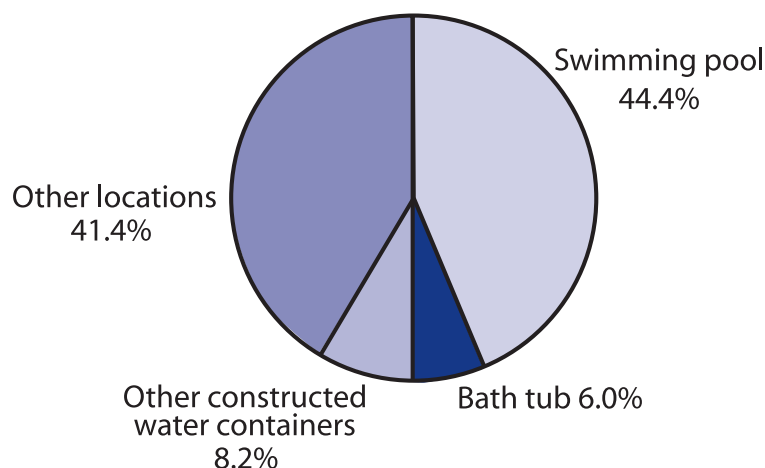
Swimming pools are a common location of drowning, especially in the 0-4 year age group. In the *International Classification of Diseases* (ICD) an external cause code indicating drowning in a swimming pool was introduced for hospitalisation data in July 1996 and for death data in 1998. For this reason only statistics collected from 1998-2000 are reported on.

- Between 1998 and 2000 there were 21 deaths and 103 hospitalisations recorded in Western Australia due to drowning in a swimming pool. These cases represented 24.7% of drowning deaths (see Figure 1) and 44.4% of all drowning hospitalisations (see Figure 2) for that three year period.
- Between 1998 and 2000 there were 85 deaths and 232 hospitalisations recorded in Western Australia due to drowning in 'other locations', which include lakes, open sea, river, streams and other unspecified locations. These cases represented 60.0% of drowning deaths (Figure 1) and 41.4% of all drowning hospitalisations (Figure 2) for that period.
- Other constructed water containers (eg. reservoirs and quenching tanks) accounted for 10.6% of drowning deaths (Figure 1) and 8.2% of hospitalisations (Figure 2).

**Figure 1: Percentage of Deaths Due to Drowning by Location (Western Australia, 1998-2000)**



**Figure 2: Percentage of Hospitalisations Due to Drowning by Location (Western Australia, 1998-2000)**



## Risk Factors

Table 4 below provides a summary of high-risk settings and groups, and highlights some of the factors that have been found to contribute to drownings, near-drownings and related injuries in specific locations.

**Table 4: Risk Factors in Specific Settings**

Location	Groups at Heightened Risk	Factors contributing to drowning, near-drownings and related injuries
Pools	Young children  Males 16-35	<ul style="list-style-type: none"> <li>• The absence of/or inadequate pool fencing.</li> <li>• An inadequate pool gate.</li> <li>• Attractive objects in pool which young children attempt to reach.</li> <li>• Safety features not being used appropriately, eg, a pool alarm may be de-activated or a pool gate or sliding self-closing door propped open.</li> <li>• An object being near the fence that enables a child to climb over the fence.</li> <li>• Supervision issues including: <ul style="list-style-type: none"> <li>- Inappropriate or no supervision</li> <li>- Assuming another person is supervising</li> <li>- Alcohol consumption by supervisors</li> <li>- Overestimating a child's swimming ability.</li> </ul> </li> <li>• Diving into the shallow end of a pool (males 16-35 at heightened risk).</li> </ul>
Bathtub	Young children	<ul style="list-style-type: none"> <li>• Young children being left in the care of a sibling.</li> <li>• Young children being left unattended in the bathtub.</li> <li>• Temporary distraction of supervisor for household task (eg. answer phone).</li> <li>• The child having an epileptic or febrile fit.</li> </ul>
Boating	Males over 20	<ul style="list-style-type: none"> <li>• Boat capsizing or overturning.</li> <li>• Alcohol consumption.</li> <li>• Not wearing a personal flotation device.</li> </ul>
Fishing Spots	People fishing	<ul style="list-style-type: none"> <li>• Presence of rock.</li> <li>• Alcohol consumption.</li> <li>• Night fishing.</li> <li>• Inappropriate weather.</li> <li>• Over confidence (among experienced fishermen).</li> <li>• Inexperience.</li> <li>• Jumping in to save another person.</li> <li>• Being alone in isolated area.</li> <li>• Lack of survival/ lifesaving skills.</li> <li>• Fishing at spots with high waves.</li> </ul>

**Table 4: (con't)**

Location	Groups at Heightened Risk	Factors contributing to drowning, near-drownings and related injuries
Surf and beaches	15-35 year olds (particularly males)  Tourists	<ul style="list-style-type: none"> <li>• Diving into sandbanks, being dumped by waves, diving off jetty or pier.</li> <li>• Limited swimming skills.</li> <li>• Swimming outside patrolled areas.</li> <li>• Being unfamiliar with Australian aquatic environments.</li> <li>• Lacking water survival and lifesaving skills.</li> <li>• Alcohol consumption.</li> <li>• Rips, currents.</li> <li>• Dangerous marine life.</li> </ul>
Rivers	16-35 year old males	<ul style="list-style-type: none"> <li>• Diving into murky water (submerged objects).</li> <li>• Diving into shallow water.</li> <li>• Alcohol consumption.</li> <li>• Currents and cold water.</li> <li>• Uneven river beds.</li> <li>• Crumbling banks.</li> </ul>
Farms	Children under 5 Males	<ul style="list-style-type: none"> <li>• No fenced play area on the property.</li> <li>• Children being left unsupervised (often only for a short time while carers perform work tasks around the property).</li> <li>• Children following an animal/pet to the dam.</li> <li>• Steep slopes surrounding the dam contribute to the child slipping into the water.</li> </ul>
Places where alcohol is consumed around water	25-35 year olds Children being supervised by adults	<ul style="list-style-type: none"> <li>• Consuming alcohol on boats and around water.</li> </ul>
Home environment	Children under 5	<ul style="list-style-type: none"> <li>• Nappy buckets.</li> <li>• Water features.</li> <li>• Pools.</li> </ul>

# **Section 3 – Current Water Safety Initiatives in Western Australia**

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## Current Water Safety Initiatives in Western Australia

The prevention of drowning and near-drowning incidents is a responsibility of everyone in the community, however in Western Australia there are several organisations that have the prevention of drowning and near drowning as their core business and other organisations that play a critical supporting role. The prevention of drowning is multifaceted and involves government and non-government stakeholders and groups.

An across-government approach is vital for the successful strategic management of water safety in Western Australia as water safety is delivered by a range of government and non-government stakeholders.

The following table is not a complete register or an exhaustive list of all Western Australian water-safety initiatives, but it provides significant guidance on current activities and highlights which agencies are conducting activities supporting drowning prevention in these areas:

- Water Safety Education and Awareness
- Research and Evaluation
- Policy, Standards, Legislation and Enforcement
- Surveillance and Rescue

To assist the Working Groups in each area, the activities of all agencies have been classified by the strategy area with which the activity aligns most closely. Further details on the activities of each agency are provided in Appendix 1.

Table 5: Current Water Safety Initiatives

	Education and Awareness	Policy, Standards, Legislation and Enforcement	Research and Evaluation	Surveillance and Rescue
<b>GOVERNMENT</b>				
Alcohol and Drug Authority	✓	✓		
Department of Agriculture	✓			
Department of Conservation and Land Management		✓		✓
Department of Education and Training	✓	✓		✓
Department of Health	✓	✓	✓	✓
Department of Housing and Works		✓	✓	
Department for Planning and Infrastructure	✓	✓	✓	✓
Department of Sport and Recreation	✓			
Fire and Emergency Services	✓	✓	✓	✓
Swan River Trust		✓		
Tourism Western Australia	✓			
Water Corporation		✓		
Water and Rivers Commission		✓		✓
Western Australian Police Service-Water Police	✓	✓	✓	
<b>LOCAL GOVERNMENT</b>	✓	✓		
<b>NON-GOVERNMENT</b>				
AUSTSWIM	✓			
FarmSafe	✓			
Injury Control Council of WA	✓			
Kidsafe	✓	✓		
Paraplegic Benefit Fund Australia	✓	✓		
Recfishwest	✓			✓
Royal Life Saving Society	✓	✓	✓	✓
St John Ambulance	✓			✓
Surf Life Saving Western Australia	✓	✓	✓	✓
Western Australian Swimming Association		✓		

The list describes the activities of those agencies which play a key role in supporting drowning prevention. It is acknowledged that there are other organisations not listed here whose role is in aquatic activity but for whom the prevention of drowning is a concern but not a primary goal.

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# Appendix 1 – Matrix of Current Activities Supporting Drowning Prevention

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## Matrix of Activities

The following matrix is not a complete register or an exhaustive list of all Western Australian water safety initiatives but it provides significant guidance on current activities and highlights which agencies are conducting activities supporting drowning prevention. It is acknowledged the many other organisations not listed here whose role is in aquatic activity, the prevention of drowning is a concern but not a primary goal.

**Table A: Examples of Current Education and Awareness Activities**

	Education and Awareness
<b>GOVERNMENT</b>	
Drug and Alcohol Office	Awareness-raising campaigns.
Department of Agriculture	Dam safety campaigns targeting the rural community.
Department of Education and Training	<ul style="list-style-type: none"> <li>• All school principals must attend professional development and training courses on the management and conduct of activities that are held off-site, with a specific focus on aquatic activities.</li> <li>• Principals must arrange professional development programs for their staff, parents and others involved in such activities.</li> <li>• The Department of Education and Training funds school staff to train and subsequently requalify in recognised aquatic rescue and resuscitation techniques.</li> <li>• In-term swimming – swimming, water safety and personal survival lessons targeting primary school-aged children.</li> <li>• Vacswim – swimming, water safety, survival and rescue lessons targeting school children and the general public.</li> </ul>
Fire and Emergency Services Authority (FESA)	<p>The Fire and Emergency Services Authority Volunteer-Marine Rescue Services Groups (VMRS) promote marine safety through public and community education, training with the provision of marine safety information and marine safety courses.</p> <p>The VMRS conduct community training initiatives including small craft proficiency courses, radio safety courses and local community educational displays.</p>
Department of Health	<p>The Department of Health's role in education and awareness varies and ranges from education strategies for parents of young children through to media campaigns and programs. The role differs for the state office through to regional units depending on the target group at high risk and the location.</p> <p>In the Department of Health there are two main sections, the Health Promotion Directorate and the Environmental Health</p>

	<b>Education and Awareness</b>
Department of Health (con't)	<p>Directorate, which work in the prevention of drowning, near-drowning and related incidents.</p> <p>The Environmental Health Branch provides presentations to swimming pool manager training courses and forums.</p>
Department for Planning and Infrastructure	<p>A major role of the Department for Planning and Infrastructure is to promote marine safety through education, training and the provision of marine safety information.</p> <p>The Recreational Boating Branch is responsible for promoting the department's policy of boating safety through education rather than regulation. They conduct programs such as 'Kids and Boats' and 'Boatsmart' which target boat owners and the general public. The Department for Planning and Infrastructure also produces and distributes nautical charts, training videos, boating and diving guides, regional boating guides, teaching aids, signage and a range of promotional material.</p> <p>In addition, the National Marine Safety Committee develops national safety education programs. Department for Planning and Infrastructure develops marine education and awareness strategies consistent with these national programs.</p>
Department of Sport and Recreation	<p>The Department of Sport and Recreation aims to enhance the quality of life of Western Australians through participation and achievement in sport and recreation. The department allocates resources and public funds to water safety in the recognition that participation in aquatic recreation should be safe as well as enjoyable.</p>
Western Australian Police Service-Water Police	<p>The Water Police provide a support role to the Department for Planning and Infrastructure in promoting marine safety through the provision of marine safety information during SOLAS (safety equipment) checks.</p> <p>The Water Police also support the Department for Planning and Infrastructure with public campaigns promoting water and boating safety.</p> <p>As the Hazard Management Agency for Marine Search and Rescue under Policy Statement 7, the WA Police Service promotes water and boating safety through the WAWP and Volunteer Marine Search and Rescue Groups around the state.</p>
Tourism Western Australia	<p>Supports education and awareness for tourists on interacting safely with the state's aquatic environment.</p>

	Education and Awareness
<b>LOCAL GOVERNMENT</b>	Local government undertakes community education and awareness-raising programs for aquatic environments within their jurisdiction which includes public and private swimming pools, rivers and dams
<b>NON-GOVERNMENT</b>	
AUSTSWIM	Development of swimming teacher education courses and resources targeting the general public.
Injury Control Council of WA	Awareness raising initiatives for general public and health professionals.
Kidsafe WA	Information and resources on childhood drowning and prevention measures. Focuses on water hazards in and around the home and covers bathroom, laundry and garden water safety for children, as well as advocacy for swimming pool fencing, targeting parents/carers of children 0-14 years, health professionals, government departments and the whole community.
Paraplegic Benefit Fund Australia	<p>Paraplegic Benefit Fund coordinates the Aquatic Spinal Injury Prevention Program (which is a collaborative program with other water safety education service providers) and through presentations with water safety stakeholders, public events and media campaigns, promotes safe diving and the correct handling and management of suspected spinal cord injury.</p> <p>Programs target the Department of Education Swimming Section Centre supervisors and teachers, AUSTSWIM teachers and examiners, Bronze Medallion students, parents and the general community.</p> <p>Provides expert advice on the content of AUSTSWIM course material.</p> <p>Production of visual media and support information for presentations and other water safety education programs.</p>
Recfishwest	Lobby group interested in preventing drownings, near-drownings and related injuries through structural changes and education. Primarily targets recreational fishermen (33% of the community).
Royal Life Saving Society	<p>Public education, targeting:</p> <ul style="list-style-type: none"> <li>• Home pool owners through the home pool inspection program</li> <li>• Resuscitation participants through resuscitation education</li> <li>• Parents through Infant Aquatic Programs at endorsed swim schools</li> </ul>

	Education and Awareness
	<ul style="list-style-type: none"> <li>• Keep Watch public awareness campaign.</li> </ul> <p>Professional development, targeting:</p> <ul style="list-style-type: none"> <li>• Community Health Nurses</li> <li>• Injury Prevention and Health Promotion Officers</li> <li>• Aboriginal Health Workers</li> <li>• Community Child Care Workers</li> <li>• Infant Aquatic and 'Heart Beat' Club Instructors</li> <li>• Home Pool Inspectors</li> <li>• Swimming Pool and Spa Association members.</li> </ul> <p>Learn to Swim and Familiarise, for:</p> <ul style="list-style-type: none"> <li>• Infant Aquatics</li> <li>• Swim and Survive</li> <li>• Junior Lifeguard Club</li> <li>• Rescue Awards.</li> </ul> <p>Runs following training programs:</p> <ul style="list-style-type: none"> <li>• Bronze Medallion Course</li> <li>• Pool Lifeguard Course</li> <li>• Self-Contained Underwater Breathing Apparatus Course</li> <li>• Swimming Teacher Rescue Award</li> <li>• Resuscitation Course</li> <li>• Senior First Aid Course</li> <li>• Essential First Aid Course</li> <li>• Heart Beat Club</li> <li>• Instructor of Swimming and Water Safety</li> <li>• Instructor of Infant Aquatics</li> <li>• Examiner Course</li> <li>• Certificate IV in Assessment and Workplace Training</li> <li>• Publication of Annual Drowning Report.</li> </ul>
St John Ambulance	<p>Teaching first aid programs statewide. Promoting first aid resuscitation material.</p> <p>Providing first responder systems at aquatic centres and public locations.</p>
Surf Life Saving Western Australia	<ul style="list-style-type: none"> <li>• Sunsmart School and Community Education Program posters displayed in numerous popular locations.</li> <li>• 'Beach to Bush' program used to promote beach safety to children from the bush.</li> <li>• Adverts run on commercial television stations during prime time hours to promote beach safety Course to members.</li> <li>• All junior lifesavers (under 14s) are required to participate in surf education.</li> <li>• Sunsmart School and Community Education Program.</li> <li>• Competitions where members learn surf safety and rescue skills.</li> </ul>

**Table B: Examples of Current Research and Evaluation Activities**

	Research and Evaluation
<b>GOVERNMENT</b>	
Fire and Emergency Services Authority	The FESA Volunteer-Marine Rescue Services Groups are members of the State Boating Council, Department for Planning and Infrastructure Recreational Boating Facilities Scheme. Bureau of Meteorology Marine Weather Consultative Committee and other committees that contribute to research and evaluation of marine safety initiatives for commercial and recreational mariners.
Department of Health	Environmental Health investigates all drownings that occur in public and aquatic centres to determine the factors contributing to the incident. The information is used to advise industry and to determine any need for legislative changes.
Department for Planning and Infrastructure	<p>The Marine Safety Directorate conducts a number of research activities. Surveys and research activities in relation to boaters and marine safety issues have been, and will continue to be, carried out by the directorate. In 2001, a benchmark survey was conducted that will assess changes in boater attitudes in the coming years.</p> <p>Recently the Marine Safety Directorate entered into a Memorandum of Understanding with the University of Western Australia in order to promote research into boating incidents and deaths in Western Australia.</p> <p>The Department for Planning and Infrastructure, as a member of the National Marine Safety Council, actively contributes to the research and evaluation of marine safety issues.</p>
Western Australian Police Service	<p>The WA Water Police collect and collate all WA Marine Search and Rescue data. As a member of the National Search and Rescue Council, the Water Police actively contributes to the research and evaluation of Marine Search and Rescue issues for strategy development.</p> <p>Data is provided to the Department for Planning and Infrastructure and the Fire and Emergency Services Authority - Marine Rescue Services for research and strategy development in relation to boating and marine safety issues.</p> <p>The Water Police collect data for non-boating drowning incidents in conjunction with inquiries conducted on behalf of the State Coroner. The (hard copy) information is provided to the Royal Lifesaving Society of Australia and the Department of Health for research and strategy development.</p>

	Research and Evaluation
<b>NON-GOVERNMENT</b>	
Paraplegic Benefit Fund Australia	Paraplegic Benefit Fund's Aquatic Spinal Injuries Prevention Program conducts campaign research. Currently conducting formative research into a public service announcement that targets 16-35 year old males in relation to aquatic spinal cord injury prevention.
Royal Life Saving Society	Conducts research/data analysis on: <ul style="list-style-type: none"> <li>• Occurrence of injury in and around aquatic facilities</li> <li>• Fencing compliance</li> <li>• Target market's awareness</li> <li>• Program effectiveness</li> <li>• Skill shortages</li> <li>• Drowning statistics</li> </ul>
Surf Life Saving Western Australia	Conducts beach safety audits for local councils and land managers.

**Table C: Examples of Current Policy, Standards, Legislation and Enforcement Activities**

	Policy, Standards, Legislation and Enforcement
<b>GOVERNMENT</b>	
Drug and Alcohol Office	Input into Liquor Licensing Act. Considers presence of water when issuing licences.
Department of Conservation and Land Management (CALM)	Undertakes risk management for visitors to their parks – by inclusion this relates to water safety and drowning prevention. Conducts safety audits, visitor information and ensures safety in new developments. Targeting all visitors to CALM-managed locations.
Department of Education and Training	Develops and implements policies and procedures for students to safely participate in a range of aquatic activities.
Fire and Emergency Services Authority	FESA Volunteer-Marine Rescue Services Groups provides assistance to the Department for Planning and Infrastructure with marine safety compliance to regulations and legislation by way of interaction with the boating public ensuring the marine safety equipment standards and fitout are adhered to prior to vessel launching. They also conduct active on-water awareness patrols.  All FESA Volunteer-Marine Rescue Services Groups marketing and communication tools carry legislative, policy and standards information.
Department of Health	The Environmental Health Directorate has a core function in the surveillance, monitoring and standard setting of recreational water bodies and facilities.

	<b>Policy, Standards, Legislation and Enforcement</b>
Department of Health (con't)	The Health Promotion Directorate, through the Injury Prevention Branch, works in policy development aligned to the National Injury Prevention Plan, which currently has drowning, and near-drowning as one of its four priority areas for action.
Department of Housing and Works	Legislative responsibility for pool fencing under <i>Local Government Miscellaneous Provisions Act 1960, Building Regulations 1989 – Private Swimming Pools</i> .  This is a new responsibility for the Department.
Department for Planning and Infrastructure	The Marine Safety Directorate is responsible for the development and management of safe boating practices, legislation and marine safety policy, with the overall aim of reducing accidents and incidents in the marine environment. The Department for Planning and Infrastructure has legislative responsibility for all navigable waters in Western Australia, including boats, boat users, marine facilities and marine pollution. The Marine Safety Directorate monitors compliance with marine safety regulations and legislation. Marine safety  Police and Department of Fisheries via interagency agreements.  The marine safety standards and principles developed by the National Marine Safety Committee (NMSC) are used in the development of the department's marine safety legislation and policies. The Department for Planning and Infrastructure is a member of the NMSC.
Water Corporation	Asset management of open drains, compensating basins and dams. The risks of drowning, near-drowning and water-related injuries are brought under control through a range of treatments to open main drains and compensating basins. Public access and activities are restricted in surface water catchments around the corporation's dams in order to maintain drinking water quality. At irrigation and recreational dams, some controlled access to the water is allowed. Signage at each dam indicates allowed and prohibited activities.
Water and Rivers Commission	Focus is on protecting the state's drinking water.
Western Australian Police Service	Supports the Department for Planning and Infrastructure to implement the legislation relating to boat safety compliance (WA Marine Act and Navigable Waters Regulations). Targets boat owners and users. The WA Police Service has a policy and enforcement role under the Criminal Code, Police Act, Coroners Act and Crimes at Sea Act for policing of the state's waterways and sea adjacent to the coast of Australia.  WA Water Police has a policy and standard development role in relation to Marine Search and Rescue as the Hazard Management Agency for that hazard under the State Emergency Management arrangements – Policy Statement 7,



	Policy, Standards, Legislation and Enforcement
	supported by FESA Marine Rescue Services and the Volunteer Marine Search and Rescue Groups throughout the state.
<b>LOCAL GOVERNMENT</b>	Local governments have a policy and enforcement role for aquatic environments within their jurisdictions. Local governments have a strong role in the implementation of standards in aquatic environments within their jurisdictions.
<b>NON-GOVERNMENT</b>	
Kidsafe WA	Contributes a child-focused perspective to legislative reform and policy development.
Paraplegic Benefit Fund Australia	Aquatic Spinal Injuries Prevention Program contributes to development of state water safety policy.  Targets Departments of Health, and Education and Training.
Royal Life Saving Society	Policy and standard development for event safety management. Development of risk management plans for aquatic-based events and aquatic locations plus the auditing of plans and the assessment of their compliance. Produces guidelines for safe pool operations.
Surf Life Saving Western Australia	Development of risk management plans for beach patrols, aquatic-based events and the management of coastal areas by local government. Development of emergency procedure plans for beaches and aquatic-based events. Development of water safety policies. Beach safety and signage audits.

**Table D: Examples of Current Surveillance and Rescue Activities**

	Surveillance and Rescue
<b>GOVERNMENT</b>	
Department of Conservation and Land Management	Undertakes risk management for visitors to their parks – by inclusion this relates to water safety and drowning prevention. Conducts safety audits, visitor information and ensures safety in new developments. Targeting all visitors to CALM-managed locations.
Department of Education and Training	Develops and implements risk management policies and procedures for students to safely participate in a range of aquatic activities.
Department of Health	The Environmental Health Directorate has a core function in the surveillance, monitoring and standard setting of recreational water bodies and facilities.

<b>Surveillance and Rescue</b>	
Fire and Emergency Services Authority	<p>FESA Volunteer-Marine Rescue Services Groups provides assistance to the Department for Planning and Infrastructure with marine safety compliance to regulations and legislation by way of interaction with the boating public ensuring the marine safety equipment standards and fitout are adhered to prior to vessel launching. They also conduct active on-water awareness patrols.</p> <p>All FESA Volunteer-Marine Rescue Services Groups marketing and communication tools carry legislative, policy and standards information.</p>
Department for Planning and Infrastructure	<p>The Marine Safety Directorate is responsible for the development and management of safe boating practices, legislation and marine safety policy, with the overall aim of reducing accidents and incidents in the marine environment.</p> <p>The Department for Planning and Infrastructure has legislative responsibility for all navigable waters in Western Australia, including boats, boat users, marine facilities and marine pollution. The Marine Safety Directorate monitors compliance with marine safety regulations and legislation. Marine safety compliance is also provided by agencies such as the Water Police and Department of Fisheries via interagency agreements.</p> <p>The marine safety standards and principles developed by the National Marine Safety Committee (NMSC) are used in the development of the department's marine safety legislation and policies. The Department for Planning and Infrastructure is a member of the NMSC.</p>
Western Australian Police Service	<p>Supports the Department for Planning and Infrastructure to implement the legislation relating to boat safety compliance (WA Marine Act and Navigable Waters Regulations). Targets boat owners and users. The WA Police Service has a policy and enforcement role under the Criminal Code, Police Act, Coroners Act and Crimes at Sea Act for policing of the state's waterways and sea adjacent to the coast of Australia</p> <p>WA Water Police has a policy and standard development role in relation to Marine Search and Rescue as the Hazard Management Agency for that hazard under the State Emergency Management arrangements – Policy Statement 7, supported by FESA Marine Rescue Services and the Volunteer Marine Search and Rescue Groups throughout the state.</p>
<b>NON-GOVERNMENT</b>	
Royal Life Saving Society	<p>Policy and standard development for event safety management. Development of risk management plans for aquatic-based events and aquatic locations plus the auditing of plans and the assessment of their compliance.</p> <p>Produces guidelines for safe pool operations.</p>

<b>Surveillance and Rescue</b>	
Surf Life Saving Western Australia	Development of risk management plans for beach patrols, aquatic-based events and the management of coastal areas by local government. Development of emergency procedure plans for beaches and aquatic-based events. Development of water safety policies. Beach safety and signage audits.
St John Ambulance	Teaching first aid programs statewide. Promoting first aid resuscitation material. Providing first responder systems at aquatic centres and public locations.

The Framework also acknowledges the many other organisations noted whose role is in aquatic activity where prevention of drowning is a concern but not a primary goal.

# Appendix 2 – Methodology for the Development of the Framework

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## Methodology for the Development of the Framework

This *Western Australian Water Safety Framework: 2004-2007* has been developed following:

- Formation of a management group: Department of Health, Department of Education and Training and Department of Sport and Recreation
- Extensive consultation with key government departments, community stakeholders and water safety service providers
- A review of water safety documents from other states and territories
- A review of the National Water Safety Plan 1998 and 2004-2007, and the National Injury Prevention Plan: Priorities for 2001-2003 and Discussion Paper on the National Injury Prevention Plan 2004 and Beyond.

In developing the Framework, particular attention has been paid to:

- Determining organisational commitment and alignment to the philosophy of the Framework
- The relevance of the key outcome areas, objectives and strategic directions for the state and the organisations
- Clarification of roles and responsibilities for each organisation
- Identification of gaps and areas requiring inclusion in the Framework
- Discussion and refinement of the processes for implementing and monitoring the Framework
- A synopsis of drowning and near-drowning incidents in Western Australia completed by the Department of Health
- A synopsis of service providers and key stakeholders and their contribution to drowning prevention

The consultation process was undertaken on the draft *Western Australian Water Safety Framework: 2004-2007*. An independent organisation was commissioned to undertake the consultation in three phases:

1. Phase one included separate consultation workshops for the government and non-government sectors. The purpose of phase one of the consultation process was to obtain feedback and recommendations for the draft Framework. The specific outcome required of the consultation was agreement on the content of the Framework and on modifications that may be required, in order to achieve a collaborative and comprehensive framework for Western Australia. Threats and enablers to the Framework were discussed as part of the consultation process.
2. Phase two of the consultation process was specific organisational feedback on the draft of the Framework. All feedback was obtained in writing from relevant organisations. The Management Committee reviewed and assessed each piece of feedback provided for inclusion in the Framework. Where relevant and value-adding, feedback was incorporated and actioned.
3. Phase three of the consultation process was long and rigorous. It commenced with a briefing session for stakeholders on the status of the Framework and the suggested implementation structure. Following the briefing session all stakeholders were contacted for final comments, concerns and solutions. The Water Safety Management Group considered all feedback and modified the Framework. Communiqués detailing process and changes were implemented in this phase of consultation to increase the communication flow between the Water Safety Management Group and the stakeholders.

A list of those consulted includes:

Government	Non-Government
Wheatbelt Public Health Unit	AUSTSWIM
Drug and Alcohol Office	Australian Swimming Coaches and Teachers Association
Department of Conservation and Land Management (CALM)	Healthway
Department of Education and Training	Injury Control Council WA
Department of Fisheries	Injury Research Centre
Department of Health	Kidsafe WA
Department of Local Government	Leisure Institute of WA Aquatics (LIWAA)
Department for Planning and Infrastructure	Paraplegic Benefit Fund Australia
Department of Sport and Recreation	Recfishwest
Eastern Perth Public and Community Health Unit	Royal Life Saving Society
Gascoyne Public Health Unit	St John Ambulance
Goldfields Public Health Unit	WA Arts, Sports and Recreation Industry Training Council
Great Southern Public Health Unit	WA Local Government Association
Kimberley Public Health Unit	WA Swimming Association
MidWest Public Health Unit	
North Metropolitan Public Health Unit	
Pilbara Public Health Unit	
Swimming Pool and Spa Association of WA	
Pilbara Public Health Unit	
Water Corporation	
Western Australian Police Service Water Police	

# Appendix 3 – Evaluation Principles

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## Evaluation Principles

This Framework describes the evaluation principles that will form the basis of an evaluation plan. An evaluation plan is needed to measure the processes and monitor the achievement of the actions outlined in the strategic action areas.

*The evaluation principles recognise there is a need to focus on the intermediate indicators of success as well as the ultimate health outcome (a reduction in drowning, near-drowning and related injuries) and the means by which this is achieved.*

Intermediate indicators of success would be measured:

- In the short-term, by monitoring new and existing partnerships in the water safety/drowning prevention sector, capacity building, stakeholder consultation and current activity in water safety/drowning prevention.
- In the medium to long-term, by examining best practice interventions in water safety through a review of existing evaluations of current and past water safety/drowning prevention education and training programs. Where appropriate, it may be necessary to establish or improve evaluations of water safety/drowning prevention interventions.
- In the long-term, by documenting the changes to legislation, regulations and standards, and measuring the adequacy and enforcement of legislation, regulations and standards, and changes in knowledge, attitudes and skills in the aquatic workforce and the community.

### Health Outcome Evaluation

To monitor the trends in fatal drownings and hospitalised near-drownings in Western Australia over the period of the Framework: 2004-2007. The data is available from coronial records along with the Hospital Morbidity Discharge System (HMDS) for near-drowning events that result in hospitalisation. An achievable objective will be to reduce the state's mortality/morbidity rates for drowning compared to those for the rest of Australia, by 2007.





